GENE BIO SOLUTION

Human IgG

Format	Catalog No.	Pack size	Dilution
Concentrated	GB3185A,B	0.1, 0.5 mL	1:100
Prediluted	GB3185AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

Immunoglobulin G (IgG) is an antibody isotype produced by plasma cells, consisting of four peptide chains: two identical heavy chains and two identical light chains, organized in a Y-shaped configuration characteristic of antibody monomers. In humans, IgG comprises four subclasses that vary just slightly in their amino acid makeup . IgG constitutes over 75% of serum immunoglobulins in humans, making it the predominant antibody isotype in circulation. Anti-IgG has demonstrated utility in evaluating renal biopsies, autoimmune diseases , identifying plasma cell neoplasms , and diagnosing non-Hodgkin lymphomas. The proportion of IgG4+ plasma cells to IgG+ plasma cells is deemed significant in diagnosing IgG4-related diseases.

INTENDED USE -

Intended for In Vitro Diagnostic Applications Human IgG [RWP49] is a mouse monoclonal antibody designed for laboratory applications to qualitatively identify human immunoglobulin (IgG) protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence must be supplemented by morphological studies utilizing appropriate controls and assessed in conjunction with the patient's clinical history and other diagnostic tests by a skilled pathologist.

SUMMARY AND EXPLANATION -

Immunoglobulin G (IgG) is an antibody isotype produced by plasma cells, consisting of four peptide chains: two identical heavy chains and two identical light chains, organized in a Y-shaped configuration characteristic of antibody monomers. In humans, IgG comprises four subclasses that vary just slightly in their amino acid composition. IgG constitutes over 75% of serum immunoglobulins in humans, making it the predominant antibody isotype present in circulation. Anti-IgG has been demonstrated to be beneficial in evaluating renal biopsies , autoimmune illnesses , identifying plasma cell neoplasms , and diagnosing non-Hodgkin lymphomas. The ratio of IgG4+ plasma cells to IgG+ plasma cells is deemed significant for diagnosing IgG4-related diseases.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The first step attaches the primary antibody to its designated epitope. Subsequent to the tagging of the antigen with a primary antibody, a secondary antibody is introduced to attach to the primary antibody. An enzyme label is subsequently introduced to attach to the secondary antibody; the detection of the attached antibody is demonstrated using a colorimetric reaction.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - RWP49

ISOTYPE - IgG1

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - Human immunoglobulin G (IgG)

IMMUNOGEN-Prokaryotic recombinant protein corresponding to 327 amino acids of the human IgG molecule

CELLULAR LOCALISATION - Cytoplasmic/cell membrane

POSITIVE TISSUE CONTROL - Tonsil

KNOWN APPLICATIONS-Immunohistochemistry 30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

SUPPLIED AS - Buffer with protein carrier and preservative

STORAGE AND STABILITY -

Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C

Materials required but not provided -

1) Positive tissue control - Tonsil
2) Negativecontroltissue(internalorexternal)
3) Microscopeslidesandcoverslips
4) Stainingjarsorbaths
5) Timer
6) Xyleneorxylenesubstitute
7) Ethanolorreagentalcohol
8) Deionizedordistilledwater
9) Heatingequipmentorenzymefortissuepretreatmentstep
10)Detection system
11)Chromogen
12)Wash buffer
13) Hematoxylin
14)Antibody diluents
15)Peroxide block
16)Light microscope
17)Mounting medium

LIMITATIONS-

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.